

IN THE CLAIMS:

Amend the claims as follows.

Claims 1-55. (Canceled)

56. (Currently Amended) An isolated polypeptide or peptide comprising 5 or more contiguous amino acids of ~~selected from at least one HCV polypeptide or peptide selected from the group consisting of:~~

~~an HCV type 3a polypeptide or peptide selected from the region spanning positions 140 to 319 of the Core/E1 region of HCV type 3a;~~

~~an HCV type 3a polypeptide or peptide selected from the region spanning positions 1556 to 1650 of the NS3/NS4 region of HCV type 3a;~~

~~an HCV type 3a polypeptide or peptide selected from the region spanning positions 1646 to 1764 of the NS3/NS4 region of HCV type 3a;~~

~~an HCV type 4 polypeptide or peptide selected from the region spanning positions 127 to 319 of the Core/E1 region of HCV type 4;~~

~~an HCV type 4 polypeptide or peptide selected from the region spanning positions 192 to 319 of the E1 region of HCV type 4;~~

~~an HCV type 4 polypeptide or peptide selected from the region spanning positions 2645 to 2757 of the NS5B region of HCV type 4;~~

~~an HCV type 5 polypeptide or peptide selected from the region spanning positions 1 to 191 of the Core region of HCV type 5;~~

~~an HCV type 5 polypeptide or peptide selected from the region spanning positions 192 to 319 of the E1 region of HCV type 5;~~

~~an HCV type 5 polypeptide or peptide selected from the region spanning positions 1 to 319 of the Core/E1 region of HCV type 5;~~

~~an HCV type 5 polypeptide or peptide selected from the region spanning positions 308 to 503 of the E1/E2 region of HCV type 5;~~

~~an HCV subtype 5 polypeptide or peptide selected from the region spanning positions 1286 to 1403 of the NS3 region of HCV subtype 5;~~

~~an HCV type 5 polypeptide or peptide selected from the region spanning positions 1646 to 1764 of the NS3/NS4 region of HCV type 5;~~

~~an HCV type 5 polypeptide or peptide selected from the region spanning positions 1284 to 1764 of the NS3/NS4 region of HCV type 5;~~

~~an HCV type 5 polypeptide or peptide selected from the region spanning positions 2645 to 2757 of the NS5 region of HCV type 5;~~

~~an HCV subtype 2d polypeptide or peptide selected from the region spanning positions 1 to 319 of the Core/E1 region of HCV subtype 2d;~~

~~an HCV subtype 2d polypeptide or peptide selected from the region spanning positions 192 to 319 of the E1 region of HCV subtype 2d;~~

~~an HCV subtype 2d polypeptide or peptide selected from the region spanning positions 2645 to 2757 of the NS5B region of HCV subtype 2d;~~

~~wherein said peptide or polypeptide contains at least one genotype-specific amino acid selected from the group consisting of T1656, L1663, H1685, E1687, G1689,~~

Y1705, A1714, A1721, V1723, H1726, Q1743, A1744, E1747, I1749, A1759 and H1762, wherein said amino acid numbering is relative to the HCV polyprotein.

Claims 57 and 58. (Canceled)

59. (Currently Amended) An isolated HCV type 3a polypeptide comprising an amino acid sequence or peptide selected from the group consisting of

- (i) ~~the polypeptides or peptides of SEQ ID NO: 32, 36, or 223, and~~
- (ii) at least 5 amino acids from the polypeptide or peptide of (i) having at least one ~~genotype-specific amino acid from the region spanning positions 1646 to 1764 of the NS3/NS4 region of HCV type 3a selected from the group consisting of T1656, L1663, H1685, E1687, G1689, Y1705, A1714, A1721, V1723, H1726, Q1743, A1744, E1747, I1749, A1759 and H1762, wherein said amino acid numbering is relative to the HCV polyprotein.~~

Claims 60-74. (Canceled)

75. (Withdrawn) A polypeptide or peptide according to claim 56 ~~any of claims 56 or 57~~, wherein said polypeptide or peptide is selected from the following peptides:

~~QPTGRSWGQ (SEQ ID NO 93)~~

~~RSEGRTSWAQ (SEQ ID NO 220)~~

~~RTEGRTSWAQ (SEQ ID NO 221)~~

~~LEWRNTSGLYVL (SEQ ID NO 83)~~

VNYRNASGIYHI (SEQ ID NO 126)
QHYRNISGIYHV (SEQ ID NO 127)
EHYRNASGIYHI (SEQ ID NO 128)
IHYRNASGIYHI (SEQ ID NO 224)
VPYRNASGIYHV (SEQ ID NO 84)
VNYRNASGIYHI (SEQ ID NO 225)
VNYRNASGVYHI (SEQ ID NO 226)
QHYRNASGIYHV (SEQ ID NO 228)
QHYRNVSGIYHV (SEQ ID NO 229)
IHYRNASDGYI (SEQ ID NO 230)
LQVKNTSSSYMV (SEQ ID NO 231)
VYEADDVILHT (SEQ ID NO 85)
VYETEHILHL (SEQ ID NO 129)
VYEADHHIMHL (SEQ ID NO 130)
VYETDHHILHL (SEQ ID NO 131)
VYEADNLILHA (SEQ ID NO 86)
VYEADYHILHL (SEQ ID NO 233)
VYETDNHILHL (SEQ ID NO 234)
VYETENHILHL (SEQ ID NO 235)
VFETDHHIMHL (SEQ ID NO 238)
VYETENHILHL (SEQ ID NO 239)
VQDGNTSTCWTPV (SEQ ID NO 87)
VQDGNTSACWTPV (SEQ ID NO 241)

VRVGNQSRCWVAL (SEQ ID NO 132)
VRTGNTSRCWVPL (SEQ ID NO 133)
VRAGNVSRWTPV (SEQ ID NO 134)
EEKGNISRCWIPV (SEQ ID NO 242)
VKTGNQSRCWVAL (SEQ ID NO 243)
VRTGNQSRCWVAL (SEQ ID NO 244)
VKTGNVSRWISL (SEQ ID NO 248)
VRKDNVSRWVQI (SEQ ID NO 249)
VRYVGATTAS (SEQ ID NO 89)
APYIGAPLES (SEQ ID NO 135)
APYVGAPLES (SEQ ID NO 136)
AVSMDAPLES (SEQ ID NO 137)
APSLGAVTAP (SEQ ID NO 90)
APSEFGAVTAP (SEQ ID NO 250)
VSQPGALTKG (SEQ ID NO 251)
VKYVGATTAS (SEQ ID NO 252)
APYIGAPVES (SEQ ID NO 253)
AQHLNAPLES (SEQ ID NO 254)
SPYVGAPLEP (SEQ ID NO 255)
SPYAGAPLEP (SEQ ID NO 256)
APYLGAPLEP (SEQ ID NO 257)
APYLGAPLES (SEQ ID NO 258)
APYVGAPLES (SEQ ID NO 259)

~~VPYLGAPLTS (SEQ ID NO 260)~~

~~APHLRAPLSS (SEQ ID NO 261)~~

~~APYLGAPLTS (SEQ ID NO 262)~~

~~RPRRHQTVQT (SEQ ID NO 91)~~

~~QPRRHWTTQD (SEQ ID NO 138)~~

~~RPRRHWTTQD (SEQ ID NO 139)~~

~~RPRQHATVQN (SEQ ID NO 92)~~

~~RPRQHATVQD (SEQ ID NO 263)~~

~~SPQH HKFVQD (SEQ ID NO 264)~~

LGGKPAIVPDKEVLYQQYDE (SEQ ID NO:97)

SQAAPYIEQAQVIAHQFKEK (SEQ ID NO:99)

IAHQFKEKVLG LLQRATQQQ (SEQ ID NO:100)

76. (Currently Amended) A composition comprising an isolated polypeptide or peptide according to any of claims 56 or 59 or 75~~57~~.

77. (Currently Amended) A method for raising antibodies comprising administering a polypeptide or peptide according to any of claims 56 or ~~57~~59 or 75 to a mammal.

78. (Currently Amended) A method of detecting, screening or confirmation of ~~for~~ the presence of HCV antibodies present in a biological sample, comprising the following steps:

- (i) providing a sample suspected of containing HCV antibody,
- (ii) contacting the sample with a polypeptide or peptide according to any of claims 56 or 59 or 7557, under appropriate conditions allowing the formation of an immune complex,
- (iii) inferring from the presence of the immune complex of step (ii) the presence of HCV antibodies in said sample.

79. (Currently Amended) A method of detecting, screening or confirmation of for one or more HCV serotypes present in a biological sample, comprising the following steps:

- (i) providing a sample suspected of containing HCV antibody,
- (ii) contacting the sample with a polypeptide or peptide according to any of claims 56 or 59 or 7557, under appropriate conditions allowing the formation of an immune complex,
- (iii) inferring from the presence of one or more of these immune complexes of step (ii) the serotype(s) present in said sample.

80. (Currently Amended) A method for detecting HCV serotype(s) present in a biological sample liable to contain it, comprising at least the following steps:

- (i) contacting the biological sample to be analyzed for the presence of HCV antibodies with at least one peptide or polypeptide according to any of claims 56 or 59 or 7557, preferentially in an immobilized form under appropriate conditions which allow the formation of an immune complex, wherein said polypeptide or peptide is

preferentially in the form of a biotinylated polypeptide or peptide and is covalently bound to a solid substrate by means of streptavidin or avidin complexes,

(ii) removing unbound components,

(iii) incubating the immune complexes formed with heterologous antibodies, which specifically bind to the antibodies present in the sample to be analyzed, with said heterologous antibodies having conjugated to a detectable label under appropriate conditions,

(iv) detecting the presence of said immune complexes visually or by means of densitometry and inferring the HCV serotype(s) present from the observed binding pattern.

81. (Currently Amended) A method for confirmation of HCV serotype(s) present in a biological sample liable to contain it, comprising at least the following steps:

(i) contacting the biological sample to be analyzed for the presence of HCV antibodies with at least one peptide or polypeptide according to any of claims 56 or 59 or 7557, preferentially in an immobilized form under appropriate conditions which allow the formation of an immune complex, wherein said polypeptide or peptide is preferentially in the form of a biotinylated polypeptide or peptide and is covalently bound to a solid substrate by means of streptavidin or avidin complexes,

(ii) removing unbound components,

(iii) incubating the immune complexes formed with heterologous antibodies, which specifically bind to the antibodies present in the sample to be analyzed, with said

heterologous antibodies having conjugated to a detectable label under appropriate conditions,

(iv) detecting the presence of said immune complexes visually or by means of densitometry and confirm the HCV serotype(s) present from the observed binding pattern.

82. (Currently Amended) A kit for detecting, screening or confirmation for one or more HCV serotype(s) present in a biological sample, comprising:

- (i) a polypeptide or peptide according to any of claims 56 or 59 or 7557,
- (ii) ~~possibly~~optionally a buffer and components necessary for producing the formation of an immune complex,
- (iii) optionally a means for detecting, screening or confirming the immune complex(es) formed.

83. (Currently Amended) A kit for detecting, screening or confirmation for the presence of HCV antibodies present in a biological sample, comprising:

- (i) a polypeptide or peptide according to any of claims 56 or 59 or 7557,
- (ii) ~~possibly~~optionally a buffer and components necessary for producing the formation of an immune complex,
- (iii) optionally a means for detecting, screening or confirming the immune complex formed.

84. (Currently Amended) A kit for detecting HCV serotype(s) present in a biological sample liable to contain it, comprising at least the following components:

- (i) at least a polypeptide or peptide according to any of claims 56 or 59 or 7557, with said polypeptide or peptide being preferentially immobilized on a solid substrate, and more preferentially on one and the same membrane strip,
- (ii) a buffer and components necessary for producing the buffer enabling binding reaction between these polypeptides or peptides and the antibodies against HCV present in the biological sample,
- (iii) optionally, a detector for determining the presence of immune complexes formed in the preceding binding reaction, and
- (iv) optionally an automated scanning and interpretation device to confirm the HCV serotype(s) present in the sample from the observed binding pattern.

85. (Currently Amended) A kit for confirmation of HCV serotype(s) present in a biological sample liable to contain it, comprising at least the following components:

- (i) at least a polypeptide or peptide according to any of claims 56 or 59 or 7557, with said polypeptide or peptide being preferentially immobilized on a solid substrate, and more preferentially on one and the same membrane strip,
- (ii) a buffer and components necessary for producing the buffer enabling binding reaction between these polypeptides or peptides and the antibodies against HCV present in the biological sample,
- (iii) optionally, a detector for determining the presence of immune complexes formed in the preceding binding reaction, and

(iv) optionally, an automated scanning and interpretation device to confirm the HCV serotype(s) present in the sample from the observed binding pattern.

Claims 86-91. (Canceled)